

ABSTRACT OF THE DISCLOSUREMETHOD FOR MANIPULATION OF SEMICONDUCTING LAYERS FOR
THINNING THESE LAYERS

This invention relates to a method for making a thin layer starting from a wafer comprising a front face with a given relief, and a back face, comprising 5 steps consisting of:

a) obtaining a support handle with a face acting as a bonding face;

b) preparing the front face of the wafer, this preparation including incomplete planarisation of the

front face of the wafer, to obtain a bonding energy E_0

between a first value corresponding to the minimum

bonding energy compatible with the later thinning step,

and a second value corresponding to the maximum bonding

energy compatible with the subsequent desolidarisation

operation, the bonding energy E_0 being such that

$E_0 = \alpha.E$, where E is the bonding energy that would be

obtained if the front face of the wafer was completely

planarised, α is the ratio between the incompletely

planarised area of the front face of the wafer and the

area of the front face of the wafer if it were

completely planarised;

c) solidarising the front face of the wafer on the bonding face of the support handle, by direct bonding;

d) thinning the wafer starting from its back face until the thin layer is obtained;

e) transferring the thin layer onto a usage support, involving separation from the support handle.

5 No figure.